

# Brent Michalski

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## Senior iOS / Platform Engineer

Senior iOS / Platform Engineer with 20+ years of software experience and 15+ years specializing in iOS. Built mission-critical mobile and platform systems for the U.S. Intelligence Community, DoD, fintech, and government agencies—spanning zero-trust app ecosystems, real-time geospatial streaming, contract-driven networking, and classified CI/CD pipelines. Known for modernizing legacy systems, hardening security and reliability, and delivering measurable performance and operational gains in high-stakes environments.

### WORK EXPERIENCE

#### **Vega Federal LLC** • Remote • 11/2024 - 11/2025

Senior iOS Engineer (Technical Lead) • Contractor

- Legacy Objective-C auth and onboarding flows were brittle and blocking modern identity features. Rebuilt authentication, sign-up, and startup in SwiftUI with OAuth, SSO, and biometric login, unlocking secure enterprise deployment and modernizing the app's core user experience.
- The codebase was dominated by brittle Objective-C and inconsistent patterns. Migrated ~75% to modern SwiftUI, added offline tile caching, and centralized MapKit/Core Location components, establishing shared architecture and standards that significantly improved developer velocity and maintainability.
- Field operations were plagued by recurring crashes due to server sync race conditions. Refactored the sync pipeline to be concurrency-safe, eliminating three critical crash paths and achieving zero crashes post-launch in low-bandwidth and offline environments.
- Real-time tracking and geotagged features lacked test coverage and production hardening. Partnered with product and backend teams to evolve these flows, introduced TDD for critical paths, and shipped improvements to the public GitHub repo—strengthening reliability and scalability for government and emergency-response users.

#### **Daugherty Business Solutions / Edward Jones** • Remote • 04/2020 - 02/2024

Senior iOS Consultant (Technical Lead) • Contractor

- Manually maintained networking code was error-prone and drifting from backend contracts. Introduced OpenAPI-driven client generation on iOS using the OpenAPI Swift Generator, establishing a contract-driven foundation for consistent, automated networking across the app.
- Authentication handling was manually wired into each endpoint and easy to get wrong. Built OpenAPI-driven authentication middleware to automatically inject tokens and cookies into all network calls, eliminating per-endpoint setup and streamlining generated networking code.
- Rare but critical crashes and performance regressions were degrading production UX. Root-caused and fixed concurrency and lifecycle issues, eliminating high-severity crash paths and materially improving app stability and responsiveness.
- Key banking workflows were effectively unusable for visually impaired users. Implemented full VoiceOver support across core banking views, materially improving accessibility and enabling independent use for customers with severe visual impairments.

**Boeing • St. Louis, MO • 03/2019 - 04/2020****Senior Embedded Software Engineer • Full-time**

- Linux builds were failing to meet DoD security hardening requirements. Delivered hardened images achieving 94% SCAP compliance, exceeding the 90% DoD threshold and clearing a major security and audit risk.
- Secure, reliable software deployment was a major risk in classified military environments. Led the architecture and design of a secure deployment platform for aircraft software, establishing best practices that delivered high-performance, reliable builds under strict security constraints.
- CI/CD pipelines lacked consistent architecture and reliability for mission-critical deployments. Defined architectural standards and coding practices for build and release pipelines, delivering predictable, high-performance builds in high-stakes, classified environments.

**PAR Government • Remote • 12/2017 - 11/2018****Senior iOS Software Engineer • Full-time**

- Field teams lacked real-time aerial visibility during operations. Engineered a live video streaming feature for the iTAK app, integrating geo-coded drone data to deliver real-time situational awareness and materially improve decision-making for military and first-responder users.
- Geospatial rendering latency was degrading operational workflows. Spearheaded integration of advanced ESRI mapping features using modern iOS architecture, reducing app latency by 33% and boosting operational efficiency by 14%.
- The team was using outdated iOS patterns and lacked consistent engineering practices. Drove adoption of modern iOS frameworks, mentored engineers on agile workflows, and established rigorous code review standards—boosting team productivity by 21% and improving overall reliability.

**Mastercard • O'Fallon, MO • 06/2017 - 11/2017****Senior Mobile Software Engineer • Contractor**

- Manual testing was slowing releases and letting regressions slip into production. Built automated unit and UI test suites, improving code reliability and cutting manual testing time by over 40%.

**NJVC, LLC. • O'Fallon, IL • 02/2010 - 04/2017****Senior Software Engineer • Full-time**

- Secure mobile app distribution and access control were unsolved problems in classified environments. Led the architecture and development of a zero-trust “GEOINT App Store” for the U.S. Intelligence Community, enabling secure distribution of 130+ applications with subscription management, launch telemetry, and an instant kill-switch for access revocation across multiple classification levels.
- High-risk mobile security issues needed independent expert review. Selected by Microsoft to perform a deep iOS application and security audit for a major financial-sector merger, validating architecture, code quality, and security posture for a mission-critical enterprise deployment.

**Monsanto (acquired by Bayer in 2018) • St. Louis, MO • 06/2004 - 08/2009****Senior Developer • Full-time**

- Research teams lacked a scalable, reliable system for managing massive genetic datasets. Partnered with scientists to design and build a multi-terabyte genetic database, enabling secure storage and analysis of critical R&D data for core research workflows.
- Internal quality and data tooling was slow, error-prone, and inconsistent. Optimized quality control systems and established companywide Perl engineering standards, improving data integrity and boosting operational efficiency by 24%.

## EDUCATION

### **Masters Degree in Adult Education and Distance Learning**

University Of Phoenix • 01/2004 - 12/2006

### **Bachelors Degree in Computer Information Systems**

National American University • 01/1994 - 12/1997

## PUBLICATIONS

### **Perl Database Programming** • 11/2002

Wiley

### **Writing CGI Applications with Perl** • 01/2001

Addison-Wesley Professional

## Medium.com

Multiple Published Articles:

- Solving SwiftData Preview Crashes (Jun. 2024)
- Xcode Integration with GitHub: A Step-by-Step Guide (May 2024)
- Lost in Privacy: Apple's Maze of Madness for Devs (May 2024)
- Failing Unit Tests: The Developer's Key to Confidence and Quality (Apr. 2024)
- Swift State for People with ADHD (Apr. 2024)

## SKILLS

Agile, Architectural Decision-Making, async/await, ChatGPT, CI/CD, Claude AI, Code Reviews, Combine, Core Data, Core Location, Cross-Functional Collaboration, Cursor, Github Copilot, iOS, Live Video Streaming, MapKit, Mentoring, OAuth/SSO, SQLite, Swift, Swift Concurrency, SwiftData, SwiftUI, TDD, Technical Documentation, XCTest, XCUITest